**LNPA WORKING GROUP**

**MEETING MINUTES:**

|  |  |  |
| --- | --- | --- |
| AmeriSuites Hotel | Sterling, VA | Host: NeuStar |

**Wednesday, April 9, 2003 – 8:30 AM – 5:00 PM**

Attendance:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | **Company** | **Name** | **Company** | | |
| Alltel | Cheryl Gordon | Susan Ortega | | Nextel |
| Paul LaGattuta | AT&T (phone) | Jason Moyer | | Nextel Partners |
| H.L. Gowda | AT&T (phone) | Dave Garner | | Qwest (phone) |
| Sean Hawkins | ATTWS | Charles Ryburn | | SBC |
| Stephen A. Sanchez | ATTWS | Leah Luper | | SBC (phone) |
| Lonnie Keck | ATTWS | David Taylor | | SBC (phone) |
| Lee Hunter | BellSouth | Diana Bordenaro | | Sprint |
| Ron Steen | BellSouth (phone) | Susan Tiffany | | Sprint PCS |
| Dave Cochran | BellSouth | Colleen Collard | | Tekelec (phone) |
| Marian Hearn | Canadian LLC | Adam Newman | | Telcordia Technologies |
| James Grasser | Cingular Wireless (phone) | Jean Anthony | | Telecom Software (phone) |
| Monica Dahmen | Cox Communications (phone) | Darren Paffenroth | | TSI |
| Dennis Robbins | Electric Lightwave (phone) | Paula Jordan | | T-Mobile |
| Keagan O’Rourke | Evolving Systems (phone) | Gary Eads | | US Cellular |
| Rick Jones | NENA | Bob Jones | | US Cellular |
| Gene Johnston | NeuStar | Charlotte Holden | | US Cellular |
| Jim Rooks | NeuStar | Chuck Bohl | | US Cellular |
| John Nakamura | NeuStar | Maggie Lee | | VeriSign |
| Rob Coffman | NeuStar (phone) | Sharon Bridges | | Verizon |
| Mindy Patterson | NeuStar (phone) | Gary Sacra | | Verizon |
| Barry Bishop | NeuStar | Kevin Lewis | | Verizon |
| Stephen Addicks | NeuStar | Jason Lee | | WorldCom (phone) |
|  |  | Karen Mulberry | | WorldCom |
|  |  |  | |  |

Attached are the Action Items assigned at the April, 2003 LNPA meeting. Also included are the remaining open Action Items from previous meetings.



NOTE: ALL ACTION ITEMS REFERENCED IN THE MINUTES BELOW HAVE BEEN CAPTURED IN THE “APRIL 2003 LNPA ACTION ITEMS” FILE ATTACHED ABOVE.

03/03 Minutes Review:

The following changes were made to the DRAFT March, 2003 LNPA Minutes during the April meeting and will be reflected in the FINAL March, 2003 version.

* Under New Business on page 13: Release 3.2 backout – Modify the second sentence to read, “Backout of the release is possible and the procedure, if necessary, would require an additional 24 hour maintenance window.”
* Add Rosemary Emmer – Nextel to the attendance list for the March meeting.

Wireless Number Portability Operations (WNPO) Committee Report as reported by Sean Hawkins, WNPO Co-Chairperson:

* Inter-carrier testing update:
* The WNPO reported that the test schedule is being updated and slots are filling up through September.
* Verizon Wireless submitted two new cases for ICP testing. It takes about two weeks to do ICP testing.
* Sprint and US Cellular have completed inter-carrier testing.
* OBF Issue No. 2529, which addresses ICP transaction hours and what happens outside those hours, was discussed. There was no resolution reached.
* NENA report – At the request of the FCC Staff, an ex parte meeting was held last week with selected members of ATIS’ Emergency Services Interconnection Forum (ESIF). The discussion topic concerned what to deliver as a callback number to a PSAP for a non-registered phone placing a 911 call. ESIF had previously submitted a letter to the FCC detailing its position on this issue. The letter supported the J36, Annex C standard as part of phase II PSAP delivery. It supported invoking this solution as part of the migration to phase II by carriers, rather than by FCC mandate. At the meeting, ESIF reiterated this position.
* US Cellular presented the attached two contributions in support of the need for multiple LRNs, in some circumstances, in a LATA with multiple tandems, either with the same LEC or different LECs.

 

* OnStar, which provides emergency services to their customers such as roadside assistance, stolen vehicle tracking, driving directions, and remote diagnostics via a device embedded in their vehicle, presented the attached contribution. The embedded vehicle devices are connected to the PSTN and are called by OnStar, and call out to OnStar, using PSTN numbers. OnStar is requesting that the porting of these numbers be considered a complex port in order to give them sufficient time to make any necessary number changes and validations in these devices.



* OBF JIP issue – The OBF has sent an invitation to the WNPO to participate on a conference call to continue discussions on how to address the issue of identifying the call origination of wireless roaming customers for intra-state vs. inter-state settlements. The WNPO will send a letter back to the OBF with their preferred date for the call. See attached for OBF invitation, issue description, and call flows.



* The WNPO reviewed the WTSC letter encouraging industry participation in inter-carrier testing. Plans are to issue the letter to various industry groups by 4/18. As added incentive for participation in testing, the letter will also cite the potential problem recently discovered during testing where port activation was prevented because the CNAM database was not updated for the number. In addition to encouraging wireline testing participation, the WTSC is urging scheduling as soon as possible to ensure slots are available.



* Porting and pooling of Type 1 Cellular numbers – Some migration of Type 1 Cellular numbers has been completed between providers. It is the recommendation of the WNPO that the NXX code should be opened in NPAC by the wireline carrier if any porting of Type 1 numbers within the code is to take place before migration. If full code migration will take place before any porting, then the code should not be opened at all in NPAC.
* NeuStar report - 28 wireless service providers are currently performing turn-up testing. Others are scheduled for future dates.
* NeuStar is developing a Number Portability Database (NPDB) capacity planning model that includes wireless porting volume projections.
* The WNPO reviewed the LNP Provisioning Flows and made modifications. Porting of Type 1 Cellular numbers is still being worked into the flows.
* WNPO Action Items/Issues List and Decision/Recommendation Matrix were updated (current versions attached).

 

* The current wireless porting Implementation Guideline and Narrative are attached.

 

Architecture Planning Team (APT) Report (Jim Rooks, NeuStar):

* Mission Statement: To assess Number Portability industry production technical issues within the purview of the LNPA Working Group and develop recommendations for the strategic direction of the Number Portability architecture.
* The APT met on 4/8/03. Attached is the meeting agenda.



* NeuStar presented the attached revised team working document to serve as a framework for the APT’s continued discussions on the strategic direction of the LNP architecture.



* Discussion of Current Issues:
* Production Issues:
* NeuStar is gathering data to present to the LLC to show the number of queries initiated by service providers and their impact on performance. for discussion of any potential future changes architecturally NeuStar stated that NPAC is a finite resource and 40-60% of current monthly operations are queries. On average, there are 5 TNs per query.
* NeuStar provided a readout of the issue experienced with the disk array rearrangement. A bug in a driver was encountered and has since been fixed. A significant improvement in throughput has now been realized as a result of the rearrangement.
* It was requested by a service provider that congestion, its causes, and what can be done to prevent its severity, be put on next month’s agenda. The requester stated it is largely a SOA issue, with large numbers of notifications going to a provider.
* Analysis of Provider Use and/or Efficiency of Past Change Orders:
* NeuStar presented the attached feature utilization spreadsheet. It reflects that the majority of service providers support Efficient Data Representation (EDR).



NeuStar took an action to put a paragraph together on each feature describing the benefits. Some service providers may be able to cost justify these now if they are having throughput issues. NeuStar will also add 3.2 performance-related enhancements to list. The APT will discuss next month how to quantify the benefits of these enhancements.

* Non-critical LSMSs (those not required for call processing updates): A discussion took place as to whether they should appear on the Partial Fail list. It’s the expectation of the group that **all** LSMSs meet performance and availability requirements.
* Sunset policy for features/functionality: This will be addressed on a case-by-case basis. The next FRS release will have a table addressing individual Change Orders and what point in time we want to enforce a sunset period.

Any sunsetted features in a package will be agreed upon in the LNPA before going into the release package and placed in the FRS table.

* Discussion of Interface Requirements:
* Business Principals:
* There was discussion of the possible benefits of batching notifications. This could reduce traffic over the interface during peak activity periods.
* Further discussion on any CMIP alternative is still on the back burner at this time.
* Discussion of Interface Improvements:
* The following Change Orders were reviewed during the APT meeting:
* Outbound Flow Control discussion: The Audit portion requires additional work.
* NANC 351 - Send Me What I Missed – NPAC will send a SWIM response with linked replies each with an embedded Action ID. The service provider will respond to the embedded Action ID which indicates to NPAC that the SWIM response was successfully processed and to take the service provider off the Partial Fail list for those TNs. NeuStar will develop flows detailing the process.
* NANC 352 – Recovery of SPID – No further comments. Detailed requirements discussion to begin next month.
* NANC 348 – BDD for Notifications – No further comments. Detailed requirements discussion to begin next month.
* NANC 347/350 – 15/60 Minute Abort Changes – No further comments. Detailed requirements discussion to begin next month.
* Discussion of Performance Requirements:
* A revised Exhibit N is currently in the hands of NeuStar and the LLC for review.
* NeuStar will provide a framework for discussion at next month’s APT meeting.

Reseller Flows:

* NeuStar walked the group through the LNP provisioning process flow narratives. A number of revisions were made. The review will also continue at the May, 2003 LNPA meeting.



* In the narrative for Figure 2, Box 8, it will state that if the OLSP is a reseller or a Type 1 number is involved, then the LSR/FOC timeframe could be longer than 24 hours.

* A Task Force will be formed to discuss issues related to the porting of non-migrated Type 1 Cellular numbers. Any process flow recommendations resulting from this Task Force will be fed into the overall discussion that is taking place in the LNPA.

NANC Multiple LRN Issue:

* This issue was raised by the Pool Administrator at the January NANC meeting. It addresses service providers requesting additional CO Codes for LRN assignments in LATAs where they already have an assigned LRN. At the January meeting, NANC requested the LNPA Working Group investigate the issue and any appropriate resolution(s).
* At the April LNPA, the group discussed the attached working document, which summarizes the issue and the contributions received to date explaining the need for multiple LRNs in a LATA. The matrix in the document will be used to identify potential solutions for each contributed scenario, and what industry group should address each, if applicable.



* The group agreed that this is not strictly a wireless carrier issue. Wireline carriers also have a need for additional LRNs in some instances in sectorized LATAs. The next iteration of the working document will state this.
* The next iteration of the DRAFT matrix will reflect as a potential resolution that the INC review their guidelines for LRN assignment to ensure they are clear that a service provider may assign an LRN per Point of Interconnection (POI) per LATA. The matrix will also identify possible mitigators discussed during the April meeting that could possibly alleviate the need for additional new code assignments in some instances. It is recognized that it may not be always possible to accommodate any of these. The possible mitigators discussed include:
* Assign any new code needed for an LRN to a rate center needing additional number inventory. The LERG-assignee returns unneeded blocks
* The service provider uses an existing code already homed to the tandem where the LRN is needed for the POI.
* Rehome an existing code from the other tandem to the tandem where the LRN is needed for the POI.
* Inter-tandem trunking in lieu of assigning an additional LRN for the second POI. This could, however, result in tandem capacity issues that drove the LATA sectorization initially. Proper billing may also be an issue.
* Rehome an existing code that does not contain an LRN from the old LERG-assignee to the service provider needing a new LRN, and then pool all ten 1K blocks to the old LERG-assignee. The new LERG-assignee then uses an available 10-digit number from the code for their new LRN.
* This issue will continue to be discussed at the May LNPA meeting. The LNPA continues to solicit contributions detailing requirements for additional LRNs and any potential resolutions.

PIMs:

* PIMs 14, 15, 20, and 21 – The LNPA reviewed the attached INC DRAFT *Procedures for Code Holder/LERG Assignee Exit*.



Gary Sacra will send a liaison to INC, prior to their 4/15/03 conference call, with the following LNPA comments:

Sections 2.15 and 3.0 state, "If there are no active or pending ports on the returned NXX code pending disconnect, the NPAC will use the Part 3 disconnect report posted on the NANPA web site in order to remove the capability to port numbers from the returned NXX code 15 business days prior to the effective date of the disconnect. This removal will cause any new port attempts against the returned NXX code to fail at the user interface, thus avoiding additional impediments to the code return process."

In lieu of NPAC monitoring the NANPA web site for Part 3 disconnect reports, the LNPA proposes that the process in these paragraphs be modified to reflect the following:

1. NANPA will send the Part 3 disconnect to NPAC when they send the Part 3 disconnect to the outgoing Codeholder/LERG Assignee.
2. NPAC will flag the code for removal in NPAC 15 business days prior to the LERG-effective disconnect date.
3. If any pending or active ports take place before the 15 day cut-off, NPAC notifies NANPA, disregards the Part 3 disconnect, and does not remove the code in NPAC.

In addition, NeuStar, at the request of the NAPM/LLC, is investigating if they have any contractual or legal concerns with making a code non-portable in NPAC. Once this investigation is completed, the LNPA will immediately inform INC of the outcome.

NOTE: This Action Item was completed on 4/15/03. INC responded that sending a Part 3 disconnect to NPAC would require an FCC-approved Change Order to the Code Administration System (CAS). NPAC will accept an e-mail from NANPA with the necessary disconnect information that is on the Part 3. NPAC requires that this overall process have appropriate regulatory approval in order to make a code non-portable. The LNPA has asked if the INC will present this process to the NANC.

* PIM 18 - Review of the Reseller Flows continues in the LNPA. The porting of non-migrated Type 1 Cellular numbers is now being incorporated into the flows. The addition of Type 1 porting, which is a port between a wireline and wireless network, has not yet been completed. Upon completion of the LNPA review of the entire NANC LNP Provisioning Flows, service providers will have an additional opportunity to review them internally prior to submission to NANC for approval.
* PIM 22 – No additional input was provided for the April LNPA meeting. PIM remains open. Verizon continues to request that the LNPA explore ways to satisfactorily resolve this issue. Service Providers have an open action item to investigate internally how often the scenario described in PIM 22 occurs for further discussion at the LNPA.



* NEW PIM 23 – This PIM, submitted by the Common Interest Group on Rating and Routing (CIGRR), addresses inconsistencies between data in the LERG and NPAC. CIGRR is seeking data validation between the LERG and NPAC for LRN, NXX, NXX-X, effective date, and Service Provider ID data that is entered into the two databases. There was no consensus to accept this PIM at the April meeting. It was reported in the LNPA by some members that this PIM was not unanimously supported at CIGRR. Adam Newman, Telcordia, will report this back to CIGRR. To be discussed on next agenda.



* NEW PIM 24 – This PIM, submitted by the Pool Administrator and AT&T Wireless, addresses instances where service providers are not following guidelines for block donation. For example, in some instances, contaminated blocks are being donated as non-contaminated blocks, or blocks with greater than 10% contamination are being donated. This is causing customers to be taken out of service or blocks to be exchanged for a less contaminated or non-contaminated block. It was mentioned during the discussion that this is already addressed in the INC PA Guidelines. There was consensus to accept this PIM. Although the PIM proposes providing the PA access to the NPAC to check for contamination prior to the assignment of a thousands block, and to check if the code is opened as portable, the PA stated that he is not advocating any particular solution. Additional solution proposals were requested.



NANC 323 (Migration of SPID) Discussion:

The LNPA reviewed and made modifications to the proposed SPID migration timeline. Following is the modified timeline.

6. NPAC to SP final notification

To LLC

7. Readiness Call

2. NPAC identifies timeframe & notifies SPs

3. SPs respond

5. LLC responds

to NPAC

4. NPAC goes to LLC

(conditional step)

1. SP notifies NPAC

8. Migration

1. Service provider notifies NPAC.
2. NPAC reviews form, determines a time estimate to complete migration at the NPAC level. NPAC then notifies all service providers of request.
3. Service providers respond with objections/agreements to NPAC notification in Step 2 with an estimate on how long it will take to migrate in their systems. The maintenance window will be timed to accommodate the longest estimate.
4. NPAC submits request to LLC for approval of the SPID Migration Maintenance Window if extension to maintenance window is needed. (Note: This step is conditional on requiring LLC approval of a maintenance window extension to perform migration.)
5. LLC responds with approval or denial if they are involved in a decision to approve any extension to the maintenance window.
6. NPAC sends out Final notification to all service providers.
7. Service providers and NPAC hold a migration readiness call 1 week prior to scheduled migration weekend.
8. Migration weekend.

Timeframe – point 1 to point 6 is 45 days ; Timeframe from point 6 to point 8 is 60 days; Total timeframe from point 1 to 8 is 105 days. Multiple migration requests over time should be accommodated, if possible, in the same window. This would be dependent on factors such as when additional requests are submitted in relation to the timeline, and the amount of data to be migrated.

============================================================================

Questions previously raised regarding the migration process were then discussed by the group:

1. SPID Migration will be coordinated and agreed upon in an industry forum.

Do we want to establish a minimum timeframe for which notification of an upcoming SPID Migration must be published - or is this a case-by-case basis?

The timeline above was tentatively approved. The first 45 days could be flexible for possibly accommodating additional migration requests made during that period in the same maintenance window.

1. What form of validation must occur in order to determine service provider production-readiness after performing (local system) SPID Migration, e.g. a “go/no-go” call?

It was agreed that we need a go/no go call, but we need to establish what the go criteria is vs. the no go criteria (Question 3).

1. What is the criteria that must be met in order for a service provider to go to production after performing SPID Migration? Scenario: If one service provider in the region hasn't completed SPID Migration and all other service providers have successfully completed it - previous Working Group discussions covered the unsuccessful service provider taking a Bulk Data Download (BDD).

Still an open question. What do we do if 18 are ready to go and 2 are not? ACTION for group for May agenda. Service providers are to determine the impacts in their systems, including back-office, of:

1. backing out of SMURF files, and
2. allowing migration to go into production in the region when they could not successfully migrate.
3. Do we need to tie the migration date with the LERG-effective date?

The group tentatively agreed that they should be tied together. There was discussion of the impact on new LERG-assignee’s customers ability to port if NPAC migration has not yet taken place.

**Thursday, April 10, 2003 – 8:30 AM – 5:00 PM**

Attendance:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | **Company** | **Name** | **Company** | | |
| Alltel | Cheryl Gordon | Susan Ortega | | Nextel |
| Paul LaGattuta | AT&T (phone) | Jason Moyer | | Nextel Partners |
| H.L. Gowda | AT&T (phone) | Dave Garner | | Qwest (phone) |
| Sean Hawkins | ATTWS | Charles Ryburn | | SBC |
| Stephen A. Sanchez | ATTWS | Leah Luper | | SBC (phone) |
| Lonnie Keck | ATTWS | Diana Bordenaro | | Sprint |
| Lee Hunter | BellSouth | Susan Tiffany | | Sprint PCS |
| Ron Steen | BellSouth (phone) | Colleen Collard | | Tekelec (phone) |
| Dave Cochran | BellSouth | Adam Newman | | Telcordia Technologies |
| Marian Hearn | Canadian LLC | Jean Anthony | | Telecom Software (phone) |
| James Grasser | Cingular Wireless (phone) | Darren Paffenroth | | TSI |
| Monica Dahmen | Cox Communications (phone) | Paula Jordan | | T-Mobile |
| Dennis Robbins | Electric Lightwave (phone) | Gary Eads | | US Cellular |
| Rick Jones | NENA | Bob Jones | | US Cellular |
| Gene Johnston | NeuStar | Charlotte Holden | | US Cellular |
| Jim Rooks | NeuStar | Chuck Bohl | | US Cellular |
| John Nakamura | NeuStar | Maggie Lee | | VeriSign |
| Rob Coffman | NeuStar (phone) | Sharon Bridges | | Verizon |
| Barry Bishop | NeuStar | Gary Sacra | | Verizon |
| Stephen Addicks | NeuStar | Kevin Lewis | | Verizon |
|  |  | Jason Lee | | WorldCom (phone) |
|  |  | Karen Mulberry | | WorldCom |
|  |  |  | |  |
|  |  |  | |  |

Reseller Flows (continuation of discussion):

* The group continued to work on the flow narratives. It was agreed that when we reach the final version, all providers will have an opportunity to do an internal review before they are sent to NANC.
* With regard to the NANC Flows for port cancellation, Service Providers are to

come to the May LNPA meeting with answers to the following questions:

1. What is the process followed by service providers when they are the Old SP and the end user contacts them to cancel a port?
2. Assuming the current process flow does not change with regard to end user contacting the Old SP to cancel the port, what is the “inter-company interface” process to contact the New SP of the cancellation, e.g. is it a FOC Supp?

Change Order Discussion:

* NANC 323 – NeuStar reported that during internal testing of NANC 323, they discovered an issue with two of the requirements.
* RR3-259 SPID Mass Update - NPAC SMS Processing of Requested Data based on status
* RR3-275 SPID Mass Update - Rejection for 'pending-like' Number Pool blocks or Subscription Versions

Both indicate that the SPID Migration will be affected by the presence of

"pending-like" Number Pool Blocks or Pooled SVs. NeuStar proposed modifying the two requirements such that the Number Pool Blocks and Pooled SVs will also be migrated. This proposal was approved by the group.

NS Capacity Planning Model:

* NeuStar presented an updated DRAFT wireless pooling/porting demand model through 2007, extrapolated from the original WNPO model, for Number Portability DataBase (NPDB) capacity planning purposes. NeuStar will continue to develop the model and will also develop wireline projections.



NANC 191/291 Change Order Edits Discussion:

* The default setting for the NANC 291 flag in NPAC Release 3.2 is “on.” A setting of “on” means that New SP Create messages must contain intermediate Destination Point Code (DPC) data (Subsystem Number = 000), and any existing Subscription Version (SV) violating this edit must be corrected before any other modification to the SV can take place. NeuStar reported that some providers have sent up final DPC data and the services such as CLASS and ISVM MWI are working for their customers within their networks. Having the 291 flag set to “on” initially will prevent these services from working properly within their networks for their new port-ins and modifies. NeuStar is working with these service providers to get the SVs cleaned up. It was agreed that the initial setting for the NANC 291 edit flag will be set to “off.” The LNPA will need to get LLC approval to change the initial setting. Charles Ryburn took an action to send a request to the NAPM/LLC to change the initial setting of the Release 3.2 NANC 291 flag to “off” in all regions until such time that the LNPA determines it is appropriate to change it to “on.”

NOTE: This item has been completed. The NAPM/LLC approved this request at

their 4/16/03 meeting.

NeuStar will provide monthly reports of cleanup progress. This will be placed on

each LNPA agenda until the cleanup is complete and the NANC 291 edit flag is

set to “on” in each region.

Attached is the NeuStar presentation used to discuss this issue.



Review of March Action Items:



* Item 0303-01: This item was completed and is Closed.
* Item 0303-02: This item was completed and is Closed. NeuStar has responded that they have no issue with the proposed process for suspending the ability to port in a code in NPAC if the appropriate regulatory authority is obtained. The LNPA has sent a request to the INC asking if they will present this proposed process to the NANC.
* Item 0303-03: This item was completed and is Closed. Gary Sacra will send a status request to the Pool Administrator. (NOTE: The follow-up status request was sent to the Pool Administrator on 4/28/03.)
* Item 0303-04: This item was completed and is Closed.
* Item 0303-05: This item was completed and is Closed.
* Item 0303-06: This item was completed and is Closed.
* Item 0103-11: Item remains Open.
* Item 0203-07: Charles Ryburn, SBC, is working with Randy Buffenbarger, NeuStar, to develop the appropriate text. Action Item remains open.
* Item 0203-09: The DRAFT User M&P for the CO Code Reallocation Process was accepted at the last Project Executive meeting. This item is Closed.
* Item 0203-10: This item has been Closed, but any additional contributions on the NANC Multiple LRN issue are welcomed.
* Item 0203-11: Item remains Open and will be discussed at a future LNPA meeting.

New Business:

* No new business was presented at the April LNPA meeting.

Remaining 2003 Meeting Schedule:

* Wireless will meet on Mondays and Tuesdays, the Architecture Planning Team will meet on Tuesdays from 1pm-5pm local time, and the LNPA will meet on Wednesdays and Thursdays.
* May Week of 5/5. NANC meets on 5/13. Hosted by Sprint in Kansas City.
* Jun. Week of 6/9. No NANC meeting. Hosted by AT&T in New York.
* Jul. Week of 7/7. NANC meets on 7/15. Hosted by Cingular in Chicago.
* Aug. Week of 8/11. No NANC meeting. Hosted by AT&T Wireless in Seattle.
* Sep. Week of 9/15. NANC meets on 9/25. Hosted by Verizon in Portland, Maine.
* Oct. Week of 10/13. No NANC meeting. Hosted by Canadian Consortium in Banff, Alberta, Canada.
* Nov. Week of 11/10. NANC meets on 11/5. Hosted by VeriSign in Overland Park, Kansas.
* Dec. Week of 12/8. No NANC meeting. Hosted by Telcordia in San Diego.